

Chapter 4

Safety & Trespass

- Level 1 Volunteer Water Quality Monitoring Training Notebook -

We recommend that teachers cover safety issues in the classroom and include these instructions and the material safety data sheets with all chemistry kits used by students.

General Precautions

Read the Material Safety Data Sheets (MSD sheets) and note precautions and spill procedures. MSD sheets are required by law to inform individuals about the hazardous nature of any chemicals with which they may come into contact. Keep the MSD sheets handy in case of spills or accidents. Teachers should keep MSD sheets in the kits at all times and keep a copy on file at their school. Additional copies of MSD sheets are posted on the Stream Team Website (<http://www.mostreamteam.org/datasheets.asp>).

Store all equipment and chemicals out of the reach of young children and pets. If there is a possibility that children may access chemicals, they should be locked in a secure place. The same is true for containers holding spent reagents.

Always wear gloves and safety glasses when performing the Dissolved Oxygen, Nitrate, Ammonia and Phosphate tests. The chemical reagents that pose the greatest human health threat are contained in the **nitrate kit** (cadmium reagent) and Hach NI8 **ammonia kit** (Nessler's reagent containing mercury). **If you have a Hach NI8 kit, please return it.** There are also hazardous (acidic) reagents in the **phosphorus kit**. Use extra caution with these kits if they are used as part of your monitoring effort.

Protection for Yourself and Your Equipment

- **Use Proper Techniques at all times.**
- **Read all chemistry kit instructions** and become familiar with the test procedure before you go into the field. We recommend that volunteers practice chemical monitoring in the home or classroom using tap water or any other readily available source of water.

- **Avoid contact between chemicals and skin, eyes, nose and mouth.** Do not eat, drink or smoke while performing chemical analyses.
- **Wear safety goggles and gloves** when handling chemical reagents.
- **Use the caps on test tubes** when instructed to do so. Do not cover a test tube with your finger when shaking or mixing.
- **If a chemical spill occurs**, follow the instructions included in the MSD sheet. Due to the small amounts of reagents in the chemical packets and because analyses are generally performed outdoors, cleaning or recovering the material is not always possible. However, continue to avoid contact with skin, eyes, nose and mouth.
- When performing analyses outdoors, **be aware of wind direction**. When measuring and adding reagents, stand with the wind to your side. This will prevent the chemical from accidentally being blown into your face.

Other Considerations

- Always wear some kind of **foot protection**. Never go barefoot in the stream while doing volunteer monitoring. River sandals are also not recommended. Boots or old tennis shoes provide greater protection from glass, tab tops or sharp stones that could cause injuries.
- **If your section of stream is deep, always wear a life jacket.** If the current is swift, which frequently occurs after heavy rainfall, and the water is above your knees do not enter the stream. Maintaining your balance in deep, rapidly flowing water is sometimes difficult. We recommend chemistry analyses only be performed on a grab sample taken from the bank or a bridge under these conditions.
- **The stream may contain pathogenic bacteria or viruses. Therefore, follow these cautionary tips:**
 1. Check with your family physician or county health department to discuss appropriate immunization.
 2. **Avoid water contact with your eyes, nose and mouth.** Do not rub your eyes or bring your hands to your mouth until after you have washed your hands with soap and warm water.
 3. **It is advisable to carry hand sanitizer** or wet wipes when you monitor. This will

allow you to clean your hands immediately after monitoring.

4. **Avoid contact between the water and any breaks in your skin** (e.g., cuts, broken blisters, open sores, etc.).

Use Common Sense

Accidents happen when least expected. An accident may be the result of an unsafe act such as standing up in a canoe, or an unsafe condition such as a leaking canoe. These situations can be related when an individual's unsafe act can result in an unsafe condition for someone else. **Use common sense while monitoring, and do not put yourself or anyone else in jeopardy.**

- Be sure that when you go out to monitor, someone knows where you are going and when you plan to return.
- Wear brightly colored or light clothing so you will be easily located in case of an accident.
- Use the buddy system. Monitoring is more fun when you have a partner and it goes faster, too.
- Containerize nitrate waste separately in a heavy-walled plastic container. Do not mix nitrate waste with other chemical waste. Clearly label the content of containers with permanent marker.
- If the weather is bad, stay home and monitor another day. No amount of data is worth your health and safety. Do not go out under flooding conditions or in temperature extremes.

Missouri's Purple Paint Statute: A New Way To Protect Your Property From Trespassers

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CAUTION: Do not rely upon this information for legal advice. See an attorney for legal counseling tailored to your specific situation and needs.

During its 1993 legislative session, the Missouri legislature enacted a new statute pertaining to trespassing. The new law, the Purple Paint Statute (RSMO 569.145), provides yet another way for Missouri landowners to protect their property from trespassers. Landowners can still use "No Trespassing" signs, however the Purple Paint Statute allows landowners to mark trees or posts with purple paint as a warning to would-be trespassers. Just like a "No Trespassing" sign or actual communication to individuals that no trespassing is allowed, the purple paint marks are considered to be adequate notice to the public that no trespassing is allowed on the property.

Missouri's law is similar to one that has been used in Arkansas since 1989. These statutes were enacted to provide landowners with an economical and easy way to keep out unwanted trespassers. The law does not require that property marked with the purple paint also be fenced, thus it is an economical alternative for landowners who do not otherwise need to fence their property. Additionally, it prevents a problem encountered when using "No Trespassing" signs -- purple paint marks can't be taken down, destroyed, or stolen!

Because the Purple Paint Statute is new, many people across the state are not yet aware that the statute exists. Regardless, the statute imputes notice to would-be trespassers. All land marked with purple paint in the manner proscribed by the statute is considered to be adequate notice to the public. It fulfills the same function as a "No Trespassing" sign, a fence, or telling someone not to come onto your property.

Under Missouri's law:

- Any owner or lessee of real property can post property with the purple paint marks.
- Purple paint marks must be placed on either trees or posts (the statute does not specifically allow the option of placing paint marks on buildings).
- Vertical paint lines must be at least 8 inches long (the statute does not mention a maximum length).
- The bottom edge of each paint mark must be between 3 feet and 5 feet off the ground.
- Paint marks must be readily visible to any person approaching the property.
- Purple paint marks cannot be more than 100 ft. apart.

The statute provides that any person trespassing onto property marked by purple paint can be found guilty of a first-degree trespassing charge. Any unauthorized entry onto property marked with the purple paint marks is considered a trespass. First-degree trespassing is a Class B Misdemeanor, with potential punishment of a maximum \$500 fine and/or a maximum of 6 months in jail.

Other violations which would subject a trespasser to first-degree trespass are: (1) entering a property posted with "No Trespassing" signs; (2) refusing to leave property once told to do so; and (3) coming onto land fenced against intruders.

Landowners can purchase the purple boundary posting paint at hardware stores across the state. Several paint companies have formulated a latex semi-paste product for the specific purpose of marking property. The paint can be applied in its semi-paste form or sprayed once thinned.

How to Find Property Owners

If property owners do not live near the potential monitoring site, they often can be located with the assistance of the county assessor's office. The address, e-mail and telephone number for each county assessor can be located at <http://www.moassessorsassn.org/assessors.htm>. The county assessor's office will have a collection of plat maps showing ownership of land parcels. To find the land owner by using plat maps, you will most likely need to be able to locate the stream site property by township, section and range. Section, township and range can be located from USGS topographic maps.

A small but growing number of counties have interactive GIS mapping software online, which can be found at <http://www.dnr.mo.gov/gis/> or <http://beacon.schneidercorp.com>. It is possible to locate landowner information through these web sites.